Barriers to Deployment

Present Issues Facing

Distributed Generation in California

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Status of Industry

STILL COMING OF AGE

Positives

- Growth prospects are solid across all technology types
- Potential benefits to grid, air quality, energy sector, job market, and manufacturing sector, and end users just being recognized
- New legislation, agencies, incentive programs present prospects for growth

Negatives

- Inconsistent and conflicting policies coming from various State entities
- Tariff structures that thwart or inhibit development
  - standby charges, demand charges, exit fees
- Complex vs simplified compliance requirements
  - many jurisdictions, lack of standardization
- Incumbent utilities slow to embrace private ownership
- Lack of strong DER industry trade / advocacy group

Private Market - Barriers

BARRIERS

- **DG Manufacturing –** Despite potential, the market still slow in development of diversified and cost-effective product offerings
- **Retail Sector -** Limited competition
- **Financial Community -** Uncertainty in underwriting and extending access to debt
- **Energy Market –** Future and extent of deregulation in question
- **Insurance –** In wake of Sept 11th, obtaining insurance is an issue that has been brought to the forefront as an additional concern to the financial community

Public Sector – Barriers

PERMITTING

Interconnection

Then

- Inconsistent interpretation of Rule 21 amongst utilities
- Slow application turnaround time was contrary to the spirit of Rule 21
- Delays caused by lack of experience with DG protection systems and vague requirements with relay testing and protection

Now

- After working with the California Utilities, a remarkable degree of cooperation and willingness to work together to resolve problems and make the process better has been demonstrated
- CEC/CPUC continue to conduct monthly workshops with all interested parties to resolve issues on a statewide basis

Public Sector – Barriers Continued

PERMITTING

Air

- Lack of standardization among districts in California regarding guidelines for emissions
- SB 1298 / RAP / EPA working to help resolve

Building Permitting

- Who Wins – Rule 21, IEEE, NEC?
- Need a national / state online resource

Opportunities

Growth

- Customers want reliability, choice, lower costs, price certainty
- DG represents lower cost alternative to utility investment in many cases
- Potential for DG market growth has been identified by Power Authority. PA should stimulate private market through debt financing and selective, targeted purchases

Public Policy

- Lack of cohesive approach across government agencies leads to too much uncertainty and confusion for healthy market development.
- Common State goals and objectives supported by uniform policies from Governor's Office, the CEC, Power Authority, CARB, CPUC, Legislature that work to complement each other would resolve this

Is DER/CHP feasible?

REALENERGY, INC.

4.6 MW online at 12 projects, 8MWs under construction, through a robust client base expanding to 65 MW by end of 2002 .